

**CLAIM AMENDMENTS**

Please amend the claims as follows:

Claims 1-14 (Cancelled)

15. (Currently amended) A method of manufacture of an internal combustion engine head, comprising:

forming a plurality of core sand elements adapted for interengagement in positions forming a core assembly for casting an internal combustion engine cylinder head,

assembling the plurality of core sand elements by placing them together in their interengaging positions to form a core assembly with an internal cavity adapted to cast an internal combustion engine head,

placing the core assembly on a moving belt conveyor and moving the core assembly to a fastening station,

intercepting the movement of the core assembly on the moving belt conveyor and stopping the core assembly,

sensing the presence of the core assembly,

lifting the stopped core assembly from the moving belt conveyor to a pre-determined fastening position above the moving belt conveyor,

retaining the core assembly by engaging an upper side thereof with a pressure-applying roof while the core assembly is in the fastening position.

positioning a plurality of smooth surface fastener guns for insertion of smooth surface fasteners to retain the core sand elements in their assembled positions in the core assembly, each smooth surface fastener gun being positioned to insert a single smooth surface fastener into two adjacent core sand elements for retention of the two adjacent core sand elements in the assembled position,

sensing the insertion of the smooth surface fasteners into the core assembly, and

upon completion of the insertion of the smooth surface fasteners, lowering the fastened core assembly onto the moving belt conveyor and moving the fastened core assembly from the fastening station by the movement of the moving belt conveyor.

16. (Original) The method of claim 15 wherein the smooth surface fasteners are staples and the plurality of smooth surface fastener guns are positioned to fasten the core assembly together by inserting one tine of a staple into only one of two adjacent core sand elements and inserting the other tine of the staple into only the other of the two adjacent core sand elements with the crown of the staple lying across the interfacing sides of the two adjacent core sand elements,

17. (Original) The method of claim 15 wherein the moving belt conveyor is narrower than the core assembly, the core assembly is placed on the narrower moving belt conveyor by a wider belt conveyor, and the wider belt conveyor is controlled to maintain a minimum time interval between the core assemblies on the narrower moving belt conveyor.

18. (Original) The method of claim 17 wherein the stopped core assembly is lifted to the predetermined fastening position by moving a lifting table located under the narrower moving belt conveyor upwardly into engagement with the underside of the core assembly on both sides of the narrower moving belt conveyor.

19. (Original) An apparatus for automatically stapling together a plurality of sand core elements in a casting core assembly carried on a moving belt conveyor, comprising:

- a movable stop adapted for location adjacent the moving belt conveyor,
- a first motor for moving the movable stop between a stop position in the path of core assemblies carried on the moving belt conveyor and a pass position out of the path of core assemblies on the moving belt conveyor,
- a proximity sensor located adjacent the stop position of the movable stop,
- a reciprocable lifting table located below the moving belt conveyor, said reciprocable lifting table having a plurality of lifting rods extending upwardly from the lifting table to terminal end locations just below and on each side of the moving belt conveyor, said plurality of lifting rods being sufficiently spaced apart on said reciprocable table to reliably engage the underside of casting core assemblies carried by the moving belt conveyor with their terminal ends,
- a lifting motor for raising and lowering the reciprocable lifting table, said lifting motor driving said lifting table upwardly so the plurality of lifting rods extend above the level of the moving belt conveyor and define with their terminal ends a fastening position for casting core assemblies carried thereby,
- a pressure-applying roof at the fastening position above the lifting table and moving belt conveyor, said pressure-applying roof including resilient means for engaging the upper sides of the core assemblies at the fastening position to assist in their retention at the fastening position,
- a plurality of movable carriers for a plurality of staple guns, each of said plurality of movable carriers being adapted to be driven between a retracted position and a staple insertion position adjacent core assemblies at the fastening position,
- a plurality of carrier drivers for driving the plurality of movable carriers between their retracted positions and staple insertion positions.

each of the movable carriers carrying a staple gun, a supply of staples, an actuator for operating the staple gun, and a sensor for sensing the insertion of staples from the staple gun, and

a control having first control means triggered by said proximity sensor for operating the lifting motor and moving the lifting table upwardly so the terminal ends of the lifting rods define the fastening position, second control means for operating the plurality of carrier drivers when the upward movement of the lifting table ceases and moving the plurality of carrier drivers to locate the plurality of staple guns in their staple insertion positions, third control means for operating the staple gun actuators when the carriers have stopped at their staple insertion positions, fourth control means triggered by signals from the plurality of staple sensors for operating the lifting motor lowering the lifting table until the terminal ends of the lifting rods are below the level of the moving belt conveyor and for operating the first motor for moving the movable stop out of the path of core assemblies on the moving belt conveyor, and fifth control means triggered by the proximity sensor for operating the first motor to move the movable stop to its stop position.

20. (Currently amended) An apparatus for automatically fastening together a plurality of assembled core sand elements in a core assembly carried on a moving belt conveyor, comprising

~~first means~~ a movable stop operable for intercepting, stopping and passing the movement of an assembly of core elements along their path on the moving belt conveyor at a pre-determined position,

~~second means~~ a proximity sensor for sensing the presence and absence of an assembly of core elements at the pre-determined position,

~~third means~~ a lifting table for lifting the assembly of core elements to a fastening position and for lowering a fastened core assembly to the moving belt conveyor,

a plurality of ~~fourth means~~ carriers for carrying a plurality of staple guns between retracted positions and staple insertion positions adjacent the assembly of core elements at the fastening position for insertion of staples into the assembly of core elements, and

a plurality of ~~fifth means~~ carrier sensors for sensing when the plurality of staple guns has inserted staples into the assembly of core elements,

~~control means~~ a controller for operating the moveable stop, the proximity sensor, the lifting table, the plurality of carriers, and the plurality of carrier sensors ~~first, second, third, fourth and fifth means~~ to place the ~~first means~~ moveable stop in the path of the assembly of core elements on the moving belt conveyor, to operate the ~~third means~~ lifting table when the ~~second means~~ proximity sensor senses a stopped assembly of core elements, to operate the ~~fourth means~~ plurality of carriers when the ~~third means~~

lifting table has lifted the assembly of core elements to the fastening position, to operate the plurality of staple guns after the plurality of staple guns have arrived at their staple insertion positions, to operate the ~~third means~~ lifting table when staples from the plurality of staple guns have been inserted into the assembly of core elements and lower the stapled assembly of core elements onto the moving belt conveyor and to remove the ~~first means~~ moveable stop from the path of the fastened core assembly on the moving belt conveyor, and to place the ~~first means~~ moveable stop in the path of core assemblies on the moving belt conveyor when the ~~second means~~ proximity sensor senses that a fastened core assembly has been moved from the pre-determined position.

21. (Currently amended) The apparatus of claim 20 wherein the ~~first means~~ comprises a movable stop is driven by a motor between a stop position above the level of the moving belt conveyor and a pass position below the level of the moving belt conveyor.

22. (Original) The apparatus of claim 21 wherein the movable stop comprises a U-shaped element having two upwardly extending legs with one upwardly extending leg located on each side of the moving belt conveyor, providing stops on each side of the moving belt conveyor, and a compressed air piston-cylinder motor to reciprocate the U-shaped element between the stop position and pass position.

23. (Currently amended) The apparatus of claim 20 wherein the ~~third means~~ comprises a lifting table is located below the moving belt conveyor, a plurality of lifting rods carried by the lifting table and extending upwardly to terminal ends just below the level of the moving belt conveyor, and a lifting motor for raising and lowering the lifting table, the terminal ends of said lifting rods defining the fastening position for core assemblies with the lifting table in its lifted position.